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## TABLE OF CONTENTS

### Editorial

- 1** Addressing Racism as a Public Health Crisis in Ohio  
Amy Ferketich

### Letter/Op-Ed

- 3** Disproportionate Impact of COVID-19 on Lower-Income, Minority Populations  
Naomi Singer

### Research Brief

- 6** Perceived Racial Discrimination and the Health of Black Youth in Ohio  
Kenneth J. Steinman, Townsend Price-Spratlen, Christopher Browning

### Research Brief

- 11** Benefits of Understanding Systemic Racism in Forming Clinician-Patient Relationships to Reduce Black Infant Mortality  
Michelle A. Gotto, Laura Morello, Marsha Michie

### Commentary

- 16** Racism Measurement Framework: A Tool for Public Health Action and Accountability  
Saira Nawaz, Kyle J. Moon, Eric Seiber, Anne Trinh, Suellen Bennett, Joshua J. Joseph





EDITORIAL

# Addressing Racism as a Public Health Crisis in Ohio

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Welcome all new and returning readers to this issue of the *Ohio Journal of Public Health (OJPH)*. This is the first special issue that *OJPH* has published outside of the regular cycle, and it is devoted to the public health crisis of racism that Ohio and other states continue to face. Public health scholars have for years examined the impact racism has on community well-being and health outcomes.<sup>1</sup> Structural racism and discrimination lead to many negative health outcomes in the Black community, including, but not limited to, higher rates of infant and maternal mortality, higher rates of hypertension and stroke, lower life expectancy, and mental health impairment. No one sector in society is solely responsible for these inequities; rather, multiple systems, including education, housing, criminal justice, health care, and others, act synergistically to create environments that literally kill people.<sup>2</sup>

When the COVID-19 pandemic struck, the devastating effects of long-standing, deep-seated, structural racism on communities of color were observed by all. News media,<sup>3</sup> government organizations,<sup>4</sup> and academic scholars<sup>5</sup> all noted the significant racial and ethnic disparities in COVID-19 incidence and mortality. Indeed, one of the largest studies to date on COVID-19 disparities concluded that these inequities are due to structural determinants, including limited employment opportunities, health care access, and housing quality that disadvantage Black and Hispanic adults.<sup>5</sup>

At the same time COVID-19 was unleashing its destruction and causing disparate effects on Black, Hispanic, and other marginalized communities, the world witnessed the cruel and unjustified killings of George Floyd, Breonna Taylor, and others at the hands of law enforcement. While these killings sparked outrage and weeks of protests across the country, they were certainly not the first to occur. Many will remember the 2014 killing of 12-year-old Tamir Rice by Cleveland police. Unfortunately, these senseless deaths continue, as we witnessed very recently in Columbus with the killing of Casey Goodson Jr. by a law enforcement agent.

While these tragedies were unfolding last spring, many communities in Ohio started to regard racism as a public health crisis (or, to declare *racism a public health crisis*). To date, 6 counties and 11 cities have made such declarations.<sup>6</sup> Governor DeWine also declared racism a public health crisis during his presentation of the report from the COVID-19 Minority Health Strike Force.<sup>7</sup> How should we respond to these declarations? As public health professionals, we know that any response requires implementing evidence-based practices, educating policymakers and the public about how they can promote healthier communities, and conducting research on ways to dismantle the multilevel barriers to health equity. In sum, we must diligently work toward the goal that Robert Jennings, Past President of the Ohio Public Health Association, set out in his June 2020 statement: *"Let us together tear down the oppressive walls of institutional racism and begin building a better community where all have an equitable opportunity to freely breathe."*<sup>8</sup>

This Editorial Board of *OJPH* envisioned this special issue early in June as one way to respond to the dual crises affecting Black people in Ohio. Conversations about the problems and solutions need to occur prior to building the healthier communities that Mr. Jennings spoke of in his statement. Our call for papers prompted outstanding contributions from health equity scholars and public health practitioners around the state. I am so proud that my public health colleagues around the state were quick to act and submit papers that were responsive to the call.

This issue features their work, including 2 research papers, a commentary, and an Op-Ed. The paper by Steinman, Price-Spratlen, and Browning presents data from the 2019 Ohio Medicaid Assessment Survey, which is one of the





largest state health surveys in the country. They report the prevalence of, and factors associated with, adult proxy-reported perceived racial discrimination of youth in Ohio. The results suggest that perceived discrimination is higher among Black youth who are older, from higher income families, and from rural communities. Additionally, perceived discrimination is associated with poor mental health outcomes. These results indicate that interventions to eliminate discrimination should target youth, as negative health effects may emerge at an early age. The other research paper in this issue, by Gotto, Morello, and Michie examines health care provider knowledge of racism and how such awareness may impact their communication with their Black pregnant patients. While this study was terminated early because of COVID-19, the preliminary findings suggest that a provider's recognition that racism impacts birth outcomes may influence their communication style with patients.

The commentary in this issue, authored by Nawaz and colleagues, promotes a more comprehensive framework for studying the multidimensional constructs of racism, including systemic racism, interpersonal racism, and internalized racism. The expanded model provides additional measures that can be assessed to determine if community-level interventions are having any impact on reducing inequities. Finally, Singer uses a legal lens in her Op-Ed to outline the many ways in which the COVID-19 pandemic negatively impacted low-income communities. She describes the effects of business closures early on, decisions to re-open states earlier than recommended, and the segment of the population that was not eligible for enhanced unemployment benefits. Combined, these factors have the potential to further widen inequities due to COVID-19.

This issue again features a cover design by Whitney Baxter and Gad Owusu, undergraduate students in the Department of Design at The Ohio State University. During a semester that was extra stressful due to surges in COVID-19 cases on college campuses in Ohio, Whitney and Gad carved out time to create a design that embraces the theme of this issue. This issue is also my penultimate as Editor. I am thrilled to announce that Professor Sheryl Chatfield, of Kent State University, will be the next Editor of OJPH. As a current Editorial Board member, author of several papers in previous OJPH issues, and public health educator, scholar, and professional, she is well-positioned to take the reins after June 2021. Until then, I will work with her on a smooth transition. And, I will continue to advocate for the important work that the Ohio Public Health Association does on a daily basis to be the "voice" of public health in Ohio.

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# Disproportionate Impact of COVID-19 on Lower-Income, Minority Populations

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At this writing, we have no cure, vaccine, or fully effective treatment for the pandemic caused by the novel coronavirus (SARS-CoV-2). Singapore, South Korea, China, Taiwan, and Hong Kong used a variety of technology-based contact tracing methods to mixed effect; these tools have not been widely applied in the United States due to resistance to government surveillance and an emphasis on personal privacy.<sup>1</sup> While heightened use of standard methods of contact tracing may have been helpful, the unusual extent to which asymptomatic individuals may transmit infection poses significant challenges to traditional approaches.<sup>2</sup> Currently, the major tool we have utilized to combat the pandemic has been mitigation, by limiting person-to-person transmission. While this tool is effective, it is a “blunt instrument” with disparate effects on higher-income versus lower-income populations (the latter disproportionately consisting of racial minorities). This disparity creates tension between the divergent interests of these groups, and raises important ethical concerns. Legal strategies for ameliorating these differential impacts are further complicated by conflicting government responses at the federal, state, and local levels.

Exposure to the novel coronavirus can occur in workplaces as well as in social and residential settings. Exposure may be reduced by eliminating travel and gatherings, closing schools and non-essential businesses, and enforcing the use of face masks. Many of the businesses that were shut down or permitted to operate only in a limited capacity, such as bars or restaurants, have operating models that involve close, indoor person-to-person interaction, the primary means by which the virus spreads. Closing or restricting these businesses, however, disproportionately affects lower-income individuals, who comprise the bulk of their employees.<sup>3</sup> Higher-income individuals are more likely to have jobs adaptable to distance work, which both enables those individuals to keep their jobs and reduces their risk of coronavirus exposure.<sup>4</sup>

This unequal impact creates difficult challenges for government officials striving simultaneously to preserve personal liberty, protect public health, and maintain a stable economy. These interests are interrelated and often in conflict. Governors and other state officials across the country have implemented emergency stay-at-home and shelter-in-place measures and now must decide whether to continue or to relax these orders.<sup>5</sup> As Rhode Island Governor Gina Raimondo said, “[There are] no good options. I’m choosing between bad option number one and bad option number two. And all of the work that we’re doing is to make this a bit less bad for people: minimize death, minimize the virus, minimize economic hardship.”<sup>6</sup> Although the federal government has only limited power to implement broad mandates, the White House has set out parameters for gradually ending social distancing measures; the president at times has been at odds with those recommendations.<sup>7</sup>

Moreover, many states, such as Georgia and Arizona, have opted to disregard these guidelines, choosing instead to reopen on a much broader scale in an attempt to revive businesses and reduce restrictions on individuals. Experts feared that large-scale reopenings would lead to more COVID-19 infections and possibly overload the health care system, concerns which to a significant degree have proven correct.<sup>8</sup> For lower-income workers, such reopenings may restore their livelihoods but endanger their lives, a dilemma faced primarily by lower-income, minority individuals, as evidenced by New York City data indicating that several neighborhoods with lowest median household incomes also have highest rates of COVID-19 infection.<sup>9</sup> According to census data, the residents of those neighborhoods are predominantly people of color. Nationally, Blacks have rates of infection 2.6 times higher than Whites, and Hispanics/Latinos have 2.8 times higher rates of infection than Whites. Both groups have rates of hospitalization almost 5 times higher than Whites.<sup>10</sup> Of the 945 cases and 27 deaths reported in Milwaukee County, Wisconsin, in early April 2020, al-



most half of the cases and 81% of the deaths involved Blacks, who comprise 26% of the county population.<sup>11</sup> This imbalance may be further exacerbated by hospital triage plans that deprioritize patients with “disproportionate burdens of pre-existing comorbidities.”<sup>7</sup>

At the federal level, the Coronavirus Aid, Relief, and Economic Security (CARES) Act provided increased unemployment benefits and direct payments to ameliorate the pandemic’s differential impact; in many cases, this support exceeded the income individuals otherwise would have received. While these strategies are well-intentioned and overall have had a positive impact, their implementation had several limitations. Low-income households may not have received CARES payments because they earned but did not report a cash income. Disabled individuals over 17 years of age were not eligible for direct payment, and their caretakers were ineligible to receive it on their behalf. The CARES Act also excluded payments for households without Social Security numbers, which renders ineligible the 800 000 “Dreamers” (young undocumented immigrants who were brought to the United States as children) and their families.<sup>12</sup> Notably, even if the federal government had emulated other countries and guaranteed at least a significant percentage of people’s incomes, doing so may have helped small business employers and workers in the short term, but not over the longer term should those businesses fail due to pandemic restrictions.

The legal considerations regarding reopening businesses involve important overlap between the federal and state governments. The federal government is broadly empowered to regulate interstate commerce; federal agencies may issue influential guidance; and the president may declare national emergencies. In accordance with the Constitution’s Tenth Amendment, non-enumerated powers, including police power, reside with the states. In a pandemic response, of necessity the federal government generally provides much of the funding, since states are required to balance their budgets. Although these entities ideally would coordinate their responses, such efforts are derailed when there is conflict between the federal government and states and localities, as in our current situation.<sup>13</sup> In the absence of a coordinated national response, states resorted to independently acquiring essential equipment and collaborating with neighboring states; while these state actions may have been necessary, they also created complications that perhaps could have been avoided with more robust national leadership.<sup>7</sup>

It is difficult to satisfactorily resolve the ethical dilemma of safeguarding people from medical harm, while neither stripping them of the ability to safely earn their living nor intensifying a global economic crisis. Addressing this problem is made even more challenging by the unequal effects of the pandemic on lower-income, minority individuals and households. Writer Joe Pinsker observed, “American inequality produces clusters of disadvantage.”<sup>3</sup> Just as lower-income individuals are more at risk for contracting

the novel coronavirus, their health disadvantage is compounded by the disproportionate effects of the pandemic on their livelihoods. With recent vaccine news enabling us finally to glimpse the possible end of the pandemic, we must also commit at that time to look back at the many different responses employed and their outcomes, so as to identify best practices for our society overall and for its most vulnerable communities.

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RESEARCH BRIEF

# Perceived Racial Discrimination and the Health of Black Youth in Ohio

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## ABSTRACT

**Background:** Perceived racial discrimination (PRD) is known to harm youth, yet few studies use large, representative samples or study caregivers' perceptions of their children's experiences with unjust treatment. We examined how such a measure of PRD was associated with demographic characteristics as well as with physical and mental health outcomes for Black youth across Ohio.

**Methods:** The 2019 Ohio Medicaid Assessment Survey was a complex telephone survey with a representative sample of 31 558 adults, 907 of whom completed a proxy interview for a youth in the household who was Black and age 6 to 18 years. One item from an Adverse Childhood Experiences (ACEs) scale assessed PRD: "To the best of your knowledge, has [name] ever experienced any of the following? Treated or judged unfairly because of [her/his] race or ethnic group."

**Results:** Weighted analyses found that PRD was more common among Black youth who were older, from higher income families, and lived in rural counties. Perceived racial discrimination was also associated with frequent mental distress and with having an emotional or behavioral problem that needs treatment or counseling. It was not associated with any physical health outcomes measured.

**Conclusion:** Our findings resemble those from other studies that use more extensive measures of PRD. While no substitute for extensive measures, the ACEs single-item measure may expand opportunities to study PRD in subgroup analyses of larger, representative samples. Yet our findings and those from other studies already provide considerable evidence that efforts to improve Black youth's mental health should consider their experience with PRD.

**Keywords:** Racial discrimination; Health outcomes; Child; Adolescent; African American

## INTRODUCTION

Recent events highlight the United States' legacy of racism and its enduring effects on the health and well-being of young people. Much of the discourse has focused on structural racism—the self-perpetuating institutions (eg, education, criminal justice, financial) that privilege white Americans over others. Yet individual experiences with racial discrimination can also have a profound negative effect on health and well-being.<sup>1</sup>

One limitation of research in this area is that studies have largely relied on convenience samples.<sup>2,3</sup> While valuable, these studies may not be generalizable across settings and may bias estimates of

the association between youth's perceptions of racial discrimination and their health outcomes.<sup>3</sup> In order to expand our understanding of racial discrimination, there is a great need for studies that can produce generalizable findings and systematically examine racial discrimination in subgroups (eg, urban versus rural youth).

Yet such studies are expensive, and few have been designed to examine racial discrimination. Instead, researchers must rely on studies designed for another purpose (eg, adolescent health) that may have limited measures of racial discrimination. It is unclear whether such limited measures are robust enough to detect an association with health outcomes. This paper uses a large, repre-





sentative dataset from Ohio to examine whether a brief, proxy measure of racial discrimination is associated with physical and mental health outcomes. To the extent that the measure yields findings that parallel those from other studies, we may have greater confidence that large, representative studies with brief measures can provide a useful contribution to the research literature in this area.

Racial discrimination involves “individuals and larger institutions, deliberately or without intent, treat[ing] racial groups differently, resulting in inequitable access to opportunities and resources.”<sup>1</sup> Studies, like ours, that employ subjective measures only capture those instances of which the respondent is aware. For this reason, the term “perceived racial discrimination” (PRD) is preferred.<sup>4</sup>

Another limitation of previous research on PRD relates to exactly *who* is perceiving racial discrimination. Most studies ask youth or adults to report their own experiences, and some ask youth to report on their caregivers’ experiences. Few, however, ask adult caregivers to report on their child’s experiences with unjust treatment. The most recent systematic review found no such examples,<sup>2</sup> although 2 recent national studies use such a measure.<sup>5,6</sup> This gap is significant, as proxy reports may be influenced by the respondent’s own experiences and thus reflect parenting strategies as well as the intergenerational, indirect transmission of the trauma of racism.<sup>7,8</sup> Also, some caregivers may recognize unfair treatment that the child is too young to understand.

Considerable research has documented the association of PRD with youth’s physical and mental health outcomes such as anxiety, depression, and preterm births.<sup>2</sup> The most recent meta-analysis and review found that PRD may have stronger effects for mental health than physical health outcomes,<sup>2,3</sup> although an earlier review found no such differences.<sup>9</sup>

Many racial and ethnic minority groups experience discrimination, each of which merits distinct attention. Scholars often focus on Black youth in particular because of the frequency with which they experience discrimination as well as its intergenerational transfer, and long-term adverse effects.<sup>7,8</sup> Americans of African descent bear a unique historic legacy in the United States and, as the largest racial minority group in Ohio, are the focus of the present study.

## METHODS

### Participants and Procedures

Because this study is based on publicly available, deidentified data, this study was exempt from review by the Institutional Review Board of The Ohio State University.

The 2019 Ohio Medicaid Assessment Survey (OMAS) assessed health status and health system-related information from the self-reports of noninstitutionalized adults who reside in Ohio. The 2019 OMAS was structured as a stratified random digit dial (RDD) dual-frame (cell phone and landline phone) complex designed

(multiple strata) telephone survey. Survey weighting was performed in stages at the county, regional, state, oversample, and cell phone level. It was fielded with the assistance of the Research Triangle Institute (RTI), International. Multimode data were collected, including phone sample data through random digit dialing and web-based or paper mail versions through address-based sampling. Overall, 31 558 surveys of Ohioans 19 years of age and older and proxy interviews for 7 404 youth 18 years of age and younger were completed: 30 068 by phone, 950 by web, and 540 by mail-in paper survey. Data for the present study focused on the subpopulation of 907 proxy interviews involving Black youth ages 6 to 18 years. The study protocol asked adult respondents who reported that a youth lived in the home to continue the survey with “... the adult in this household who best knows about [child’s name]’s health insurance coverage and health status.” Whereas “caregiver” is a reasonable term to describe these adult respondents, this is admittedly an assumption. The 2019 OMAS was the eighth iteration of the survey, and additional details regarding methods are available at <https://grc.osu.edu/OMAS>.

### Measures

#### Demographics

Missing values for demographic variables were imputed using a weighted sequential hotdeck imputation procedure. When a respondent reported the child’s race as “Black” or “African American” and no other category, they were classified as Black for this study. Of the 907 proxy interviews of Black youth ages 6 to 18 years, 24 were missing data on youth race (2.6%) but were imputed as Black. Standard survey items assessed age, sex, and income as percentage of the federal poverty level. County type distinguished among rural counties (eg, Vinton) as well as larger (eg, Franklin) and smaller (eg, Richland) metropolitan counties and suburban counties (eg, Licking) using criteria that OMAS study directors developed in 2004 in consultation with the National Research Council’s Committee on Population and Demography (Tim Sahr, phone communication July 2020). For the subpopulation in this study, 4.6% of the county type values were imputed.

#### Racial discrimination

Perceived racial discrimination was measured by a single item from a series of 8 items on Adverse Childhood Experiences that have been used in other studies:<sup>5,6</sup> “To the best of your knowledge, has [youth’s name] ever experienced any of the following?” One of these items was “Treated or judged unfairly because of his/her race or ethnic group.” When a caregiver responded “yes,” the youth was classified as having PRD. Thirty-six cases (4.0%) were missing data on this variable.

#### Health outcomes

Health outcomes included the respondent’s perception of the youth’s overall health status, “In general, how would you describe [youth’s name]’s health? Would you say [her/his] health is excel-



lent, very good, good, fair, or poor?" Responses were collapsed into "fair" or "poor" versus "excellent," "very good," or "good." Obesity was based on the youth's caregiver-reported body mass index (BMI) being at or above the 95th percentile for youth of the same age and sex. Asthma was assessed by "Has a doctor or other health professional ever told you that [youth's name] has asthma?" and developmental disability by a similar item, "Does [youth's name] have a developmental disability?" A single item measured frequent mental distress, "Now, thinking about your child's mental health, which includes stress, depression, and problems with emotions or substance use, for how many days, during the past 30 days did a mental health condition or emotional problem keep [youth's name] from participating in school, social relationships with friends, or other usual activities?" (For youth younger than 13, the phrase "or substance use" was omitted.) Responses of 7 days or greater were classified as frequent mental distress. This classification does not represent a clinical diagnosis, but it does represent a caregiver's perception of a meaningful degree of impairment in the youth's life during the previous month. Three items adapted from a screener for youth with special health care needs<sup>10</sup> used the stem "Because of a physical, mental, emotional condition lasting 6 months or more, does [youth's name] ..." The specific items includ-

ed, "...currently need or use medicine prescribed by a doctor or other health care professional, other than vitamins?"; "...need or get special therapy such as physical, occupational, or speech therapy?"; and "have any kind of emotional, developmental, or behavioral problem for which [she/he] needs or gets treatment or counseling?"

### Statistical Analyses

Analyses were performed using Stata version 16 and estimates were weighted to be representative of all noninstitutionalized Black youth, ages 6 to 18 years in Ohio. Most of the health outcomes were not asked of children younger than 6, as doing so would be inappropriate. (For instance, asthma screening procedures are not accurate before 5 years of age, so few young children receive such a diagnosis.) Moreover, PRD was much less common for youth ages 0 to 5 years (3.3%, 95%CI 1.6%-5.0%).

### RESULTS

The prevalence of PRD (Table 1) was similar for females and males but was more common among 13- to 18-year-olds (22.0%, 95%CI 17.3%-26.7%) compared to 6- to 12-year-olds (13.6%, 95%CI 9.8%-17.5%). About 40.3% (95%CI 29.4%-51.2%) of Black youth

**Table 1. Percent of Black Youth Perceived to Have Experienced Racial Discrimination**

	Percent <sup>a</sup>	(95% CI)	P value <sup>b</sup>
<b>Total (n=871)</b>	17.5	(14.5 - 20.5)	--
<b>Male</b>	15.1	(11.5 - 18.8)	0.11
<b>Female</b>	19.9	(15.2 - 24.7)	
<b>Age 6-12 years</b>	13.6	(9.8 - 17.5)	<0.01
<b>Age 13-18 years</b>	22.0	(17.3 - 26.7)	
<b>Major metropolitan</b>	13.5	(9.6 - 17.4)	<0.01
<b>Smaller metropolitan</b>	19.0	(13.4 - 24.6)	
<b>Suburban</b>	19.7	(8.6 - 30.9)	
<b>Rural</b>	40.3	(29.4 - 51.2)	
<b>Income &lt;138% FPL</b>	14.8	(10.8 - 18.8)	<0.01
<b>Income 138-206% FPL</b>	16.6	(9.8 - 23.3)	
<b>Income 207-400% FPL</b>	16.8	(10.7 - 22.9)	
<b>Income &gt;400% FPL</b>	34.3	(22.3 - 46.3)	

Abbreviations: CI, confidence interval; FPL, Federal Poverty Level

<sup>a</sup> Estimates are weighted to be representative of all noninstitutionalized Black youth, ages 6-18 years in Ohio.

<sup>b</sup> P value of Pearson  $\chi^2$  test



living in rural counties experienced PRD—nearly 3 times the estimate for Ohio’s 3 largest metropolitan counties (Cuyahoga, Franklin, Hamilton; 13.5% 95%CI 9.6%-17.4%) and more than twice as likely as those living in other counties. And youth with family incomes greater than 400% FPL were more than twice as likely as youth from lower incomes to have PRD.

Analyses found that PRD was not associated with youth’s obesity, asthma, developmental disability, needing/using prescribed medication, or needing/using special therapy; nor was it associated with overall fair/poor health status (Table 2). It was, however, associated with youth’s frequent mental distress and with having an emotional, developmental, or behavioral problem for which [she/he] needs or gets treatment or counseling. For example, among Black youth in Ohio ages 6 to 18 years, 10.7% of those with PRD experienced frequent mental distress, compared to only 2.6% who did not report PRD—a 4-fold difference.

## DISCUSSION

Our finding that PRD is associated with mental, but not physical health outcomes among Black youth resembles findings from many other studies, even as the research literature is not always

consistent.<sup>2,3</sup> This suggests that other researchers could use this brief measure of PRD to help expand research on the topic.

The greater prevalence of PRD in rural counties might be attributed to these areas being predominantly White. Other studies have found that living in a predominantly White community was associated with an increase in youth experiencing PRD.<sup>11,12</sup> In predominantly White settings, young Black people may be more likely to be treated differently because they appear “different” on a socially-meaningful category—race.<sup>11</sup>

Similarly, our finding of a positive association between PRD and income parallels previous research that finds greater PRD among Blacks with higher socioeconomic status.<sup>12</sup> Wealthier children (and their caregivers) may have more access to education, and therefore may be more likely to perceive racial discrimination. Curiously, this study’s findings on income conflict with two recent studies that employed the same measure of PRD yet found no bivariate association.<sup>5,6</sup> The inconsistent results might be explained by age of their data—from 2011-2012. National attitudes about race have shifted markedly since then.<sup>13</sup> In addition, the difference may reflect something about Ohio, as some research suggests Ohio departs from national averages on measures of racial attitudes.<sup>13,14</sup>

**Table 2. Physical and Mental Health Outcomes Among Black Youth who Have Versus Have Not Perceived Racial Discrimination**

	Among youth who <u>have</u> perceived racial discrimination		Among youth who <u>have not</u> perceived racial discrimination		P value <sup>b</sup>
	Percent <sup>a</sup>	(95% CI)	Percent <sup>a</sup>	95% CI	
<b>Fair/poor health status</b>	11.1	(5.6-16.6)	6.6	(3.9 - 9.2)	0.11
<b>Obesity</b>	27.0	(18.5 - 35.5)	32.4	(27.7 – 37.1)	0.29
<b>Asthma</b>	29.0	(20.4 - 37.7)	23.4	(19.4 – 27.3)	0.23
<b>Developmental disability</b>	16.5	(10.2 - 22.9)	14.2	(10.8 – 17.7)	0.52
<b>Needs or uses prescribed medication</b>	26.8	(19.2 - 34.5)	20.4	(16.7 – 24.1)	0.11
<b>Needs or gets special therapy (eg, physical therapy)</b>	9.6	(4.5 - 14.6)	9.1	(6.3 – 11.9)	0.85
<b>Needs or gets counseling or treatment for any kind of emotional, developmental, or behavioral problem</b>	25.1	(17.4 - 32.8)	15.1	(11.7 – 18.5)	<0.01
<b>Frequent mental distress</b>	10.7	(5.5 - 16.0)	2.6	(1.3 – 3.9)	<0.01

<sup>a</sup> Estimates are weighted to be representative of all noninstitutionalized Black youth, ages 6-18 years in Ohio.

<sup>b</sup> P value of Pearson  $\chi^2$  test



## Limitations

Perceived racial discrimination cannot be rigorously measured by a single item, especially when it involves a caregiver reporting on behalf of a child. The estimate that 17.5% of Black youth in Ohio experience PRD, for instance, is almost certainly low, as studies with more complete measures yield higher prevalence rates.<sup>15,16</sup> While the brief measure may have some utility, it should not be used to assess the prevalence of PRD.

This study's cross-sectional design meant that we could not determine the causal influence of PRD on health, only whether they are associated. Thus, these findings may reflect the harmful effects of prejudice as well as evidence that Black youth with mental health issues may be more likely to experience or perceive racial discrimination.<sup>5</sup>

## PUBLIC HEALTH IMPLICATIONS

Efforts to improve the mental health of Black youth should consider their experience with racism, especially for those living in rural areas or higher income households. Health care providers can best serve their patients by ensuring that "all patients and families know that they are welcome, that they will be treated with mutual respect, and that high-quality care will be delivered regardless of background."<sup>17(p5)</sup> Given the pervasive racial/ethnic disparities in youth's access to mental health care,<sup>18</sup> Black families deserve clinical encounters that promote, rather than undermine, their youth's well-being. And public health efforts should ensure that rural and higher income youth are not neglected in preventing racial discrimination and associated mental health issues.

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RESEARCH BRIEF

# Benefits of Understanding Systemic Racism in Forming Clinician-Patient Relationships to Reduce Black Infant Mortality

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## ABSTRACT

**Background:** The United States lags far behind other developed nations in our overall infant mortality rate. Public health researcher Arline Geronimus has described a “weathering” effect of chronic racial stress among Black women that contributes to high rates of preterm birth, the leading cause of infant death. Trusting relationships between clinicians and patients may play a role in reducing infant mortality for Black mothers. Based on a social-ecological model of health care communication around infant mortality, we focus here on doctor-patient communication and correlations between clinicians’ understandings of systemic racism and their communication with Black pregnant patients.

**Methods:** This paper reports the findings from interviews with 5 maternal health clinicians (prior to recruitment being temporarily paused due to COVID-19) practicing at Cuyahoga County hospitals that serve large populations of Black women. Qualitative coding methods based in grounded theory were used to draw out themes from interview transcripts.

**Results:** Doctor-patient communication was an emergent theme in these interviews. Results suggest an association between clinicians’ understanding of the impact of systemic racism and their ability to communicate successfully and form positive bonds with pregnant mothers who are at higher risk of infant mortality.

**Conclusion:** Acknowledging systemic racism as the cause of poor social determinants of health, which in turn contribute to higher rates of infant mortality, may provide clinicians a pathway to more positive communication and higher levels of trust with their patients, which in turn may play a role in reducing infant mortality in the Black community. Further research should investigate these associations.

**Keywords:** Infant mortality; Systemic racism; Communication; Clinician-patient relationship; Implicit bias

## INTRODUCTION

The United States began tracking infant death by race in 1850, when 217 of every 1000 White babies and 340 of every 1000 Black babies did not reach their first birthday.<sup>1</sup> While the overall US infant mortality rate (IMR, the number of infant deaths per 1000 live births, a leading indicator in the health of a community<sup>2</sup>) has dropped dramatically since then, we still lag far behind other wealthy nations (55th overall, with an IMR of 5.8<sup>3</sup>).

These national statistics belie deep geographic, health care access, and, especially, racial disparities: the gap between White and Black IMR is worse now than it was in 1850.<sup>1</sup> Ohio’s 2018 IMR was 6.9, but for Black Ohioans was 13.9.<sup>4</sup> And in Cuyahoga County, where the overall 2018 IMR was among Ohio’s worst at 8.7, the White IMR was 4.5 (up from 2017 due to the opioid epidemic), and the Black IMR was 14.9.<sup>5</sup> While we are seeing progress, Black babies in Cuyahoga County are still dying at 3.3 times the rate of White babies.





Scholar Dorothy Roberts has argued that the state has historically neglected Black infants via the socioeconomic status (SES) of their mothers through poverty, inadequate housing, poor nutrition, and lack of access to health care.<sup>6</sup> Dr. Roberts points, for example, to the harsh punishment of pregnant Black women who self-medicate with illicit drugs versus the “temperate regulation” of pregnant middle-class women who use pharmaceuticals to treat their mental health, despite evidence that use of antidepressants and other prescribed medications during pregnancy may cause subtle neurological problems in newborns.<sup>7</sup> Such disparities in social treatment contribute to what public health researcher Arline Geronimus has termed “weathering,” which she defines as the deterioration of Black women’s health due to chronic stress. This stress is caused by the cumulative exposure of socioeconomic disadvantage in a society burdened by structural and systemic racism and has consistently been linked to preterm birth.<sup>8</sup> Multiple studies have reported associations between hormonal markers of chronic stress and preterm birth, showing disproportionate effects among Black women and women with low SES.<sup>9</sup> Preterm birth, the leading cause of infant death, has increased 31% in the United States since 1980, particularly among Black women, and risk identification, early detection, and pharmaceutical interventions have made no impact in reducing its occurrence.<sup>9</sup>

In order to shed light on the marked racial disparities in infant mortality in Cuyahoga County, this study is exploring local clinicians’ perceptions of and responses to these issues.

## METHODS

### Setting

The target population was maternal health clinicians from 3 large Cuyahoga County, Ohio, hospitals that serve large numbers of Black women giving birth and large numbers of Medicaid-insured patients.

### Design

This ongoing qualitative research study includes one-on-one semi-structured interviews by telephone with maternal health care providers, focus groups with nurses and support staff who work with pregnant patients, and an interactive return of findings to participating hospitals to inform their future practice.

### Participants

This portion of the study was open to physicians of any experience level who work with pregnant patients or patients seeking to become pregnant, at 3 Cuyahoga County hospitals. Before interviews were paused due to the COVID-19 pandemic, our 5 participants included 4 females and 1 male, ranging in experience level from resident to attending physician, with 4 White and 1 Asian participant (Table 1).

**Table 1. Participant Demographics**

Gender	
Female	4
Male	1
Ethnicity	
White (Non-Hispanic)	4
Asian	1
Clinical Experience	
Resident	2
Fellow	1
Attending physician	2

### Procedures

All research methods were approved by the Case Western Reserve University Institutional Review Board (IRB).<sup>10</sup> Women’s Health departments at 3 Cuyahoga County hospitals agreed to provide access to clinical staff for this study. Maternal health physicians at 3 Cuyahoga County hospitals were contacted via email to participate in this portion of the study; respondents were screened and gave verbal consent by phone, and all were provided with an electronic copy of the IRB-approved study information document. To provide opportunities for in-depth reflection on potentially sensitive topics (particularly infant mortality, systemic racism, and implicit bias in clinical care), individual interviews with maternal health clinicians were conducted. All 60 to 90 minute interviews were conducted via phone by the second author using a guided questionnaire, audio-recorded, and transcribed. Following 5 initial interviews, recruitment was paused due to the COVID-19 pandemic.

### Measures/Outcomes

Participants provided basic demographic information, then were asked open-ended questions about: awareness and understanding of racial disparities in infant mortality at national and local levels (eg, What do you think the most important causes of these health disparities are?); the ways these understandings impacted interactions with Black pregnant patients (eg, How do you see these issues affecting your African American patients here? How have they affected how you interact with your patients?); and awareness and opinions about local efforts to mitigate disparities in infant mortality (including community birth workers and implicit bias training, eg, What do you think about these interventions? What recommendations might you have for your institution?).



## Data Analysis

Research staff used an approach based in grounded theory,<sup>11</sup> with preliminary analyses informing successive interviews and analyses; themes, categories, and theoretical constructs emerged from qualitative coding and analysis. De-identified transcripts were uploaded to Dedoose (www.dedoose.com), a widely-used qualitative analysis software package. The first and third authors created a codebook using 1 interview; both then coded a second interview, resolved discrepancies by consensus, and revised the codebook. To maintain consistency, the first author coded all transcripts, including those used to create the codebook. A matrix was developed to surface major themes from the interviews.

## RESULTS

We interviewed 5 prenatal health care physicians at Cuyahoga County hospitals (Table 1). Analysis of the 5 interviews in this preliminary dataset revealed communication as a consistently emergent theme with implications at multiple levels, although communication was not a primary focus of the interview questions. This primary theme included 4 categories: doctor-patient communication; communication among clinicians; communication between hospitals and outside resources; and communication within the entire care system. For this brief, we focus on the category that was discussed the most by interviewees: doctor-patient communication, which included clinicians' discussions of mistrust from their Black pregnant patients; their awareness of implicit bias in clinical interactions; their understanding of systemic racism and its impact on the social determinants of health; and their understanding of systemic racism as a cause of chronic stress and related symptoms in Black pregnant patients. We found that those clinicians who more readily acknowledged the role of clinicians and health care systems in mistrust and lack of communication also reported more positive interactions with their patients and perceived more trust from those patients.

All 5 interviewees reported perceiving mistrust among their Black patients. Most respondents discussed their understanding that this mistrust comes from a history of Black patients being mistreated in the US medical system. However, their approaches for managing this mistrust varied. Some clinicians' responses alluded to implicit biases, and, regardless of age, some reported feeling challenged in relating to their patients. Three respondents appeared conflicted in accepting that Black women are not heard in the same ways as their White counterparts. For example, Participant 1 noted, "I don't know. It's hard for me to believe that a clinician is going to blow off someone like Serena Williams [who reported that clinicians ignored her life-threatening pulmonary embolism after childbirth]. Do you know what I mean?"

*"[There is] a longstanding history of mistrust in the health care system with African-Americans, for good reason given our histo-*

*ry of how they were taken advantage of. I still feel that even today, there's always this level of mistrust when we talk with patients, more so from my African-American patients than any other ethnicity. I'm very conscious when I do counsel them...that I'm explaining as much as I can as clear as I can and offer to talk to their family members or wait for their family to be there." – Participant 5*

Two interviewees described a deep awareness of racial disparities in maternal and infant mortality, both nationally and locally, and acknowledged their own biases. They also described independent information seeking on implicit bias and disparities in infant mortality. These 2 also recounted more positive and collaborative encounters with their patients than the other 3 participants:

*"I would like to hope that it helps in my counseling. I think it does. It helps me when I make a plan for a patient, and they don't do it exactly as I had envisioned, to take a step back and say, well, maybe why? What other influences are there in your life that are impacting how you're interacting with me and the health care system? What other way can I use to explain what my goal is that maybe makes it easier for you to understand or for us to work on this in a more collaborative approach?...We can find common ground together to work towards our shared goal of healthy mom and baby." – Participant 4*

In contrast, the 3 clinicians who reported lower levels of awareness of the causes of infant mortality and were more likely to attribute disparities to lack of access, poverty, or obesity, also reported more difficulty in building trust and establishing rapport with their patients. These clinicians also described frustration with patients they viewed as "noncompliant" or unable to handle basic medical issues. These 3 clinicians reported patients who were skeptical of their recommendations and asked about what they may have seen on the internet or have heard from a family member. They also reported that when these conversations went awry, patients might not return for further appointments. Comparatively, the 2 clinicians who accepted this mistrust as historically-based and increased their responsiveness to it, reported changing their practice patterns to better accommodate these types of questions and concerns:

*"I feel like we just have to make that time. I have a patient in mind right now ... where I'm like, "Do you wanna call your family? I'm happy, whenever they get here, to go over what we've talked about already and the reasons behind that." A lot of patients don't understand what's going on and they just feel like they're in the dark and they're just kind of being ushered around to different things and then that will be a negative memory and a negative experience for them that's going to then impact the rest of their future health care interactions." – Participant 5*



In contrast, other clinicians in our study attributed racial disparities in infant mortality to poor behavior by pregnant women, suggesting that Black women have high-risk pregnancies because they are overweight, have hypertension, or because they are too young, too poor, or unmarried. The clinicians who attributed these disparities to poor behavior by pregnant women were less likely to associate these social determinants of health with systemic racism and were more likely to self-report lower levels of both acceptance in the concept of implicit bias and confidence in implicit bias training.

## DISCUSSION

In these initial interviews with clinicians, an understanding of systemic racism as a cause of both chronic stress and poorer outcomes for Black mothers and babies was associated with an ability to communicate with Black patients in ways that fostered trust. These preliminary associations echo the findings of previous research on doctor-patient communication as a method of building trust with patients, which has found that the physician's approach to the medical encounter matters more than time spent.<sup>12</sup> Other studies have shown that communication and interpersonal skills, such as an ability to listen and repeat back what the patient has explained, help foster trust.<sup>12</sup> Clinicians' willingness to ask about health history and psychosocial concerns has been correlated with higher satisfaction among both patients and providers.<sup>13</sup>

This preliminary data suggest that clinician-patient relationships may be influenced by clinicians' understanding of systemic racism and its impact on the social determinants of health. Throughout our interviews, clinicians who showed a higher awareness of systemic racism and accepted systemic racism as a primary factor in the social determinants of health also self-reported more *positive and trusting* relationships with their patients. In contrast, clinicians who viewed the social determinants of health as being more associated with personal choice and responsibility self-reported more *negative and untrusting* relationships with their patients.

Though our sample size in this analysis is small, a clear narrative of communication emerged from the interviews. Though communication was not a primary topic of our interview guide, interviewees returned to this theme repeatedly. Our findings suggest that doctor-patient communication may be a *vehicle* through which clinicians' awareness of systemic racism either improves or hinders their patient relationships, ultimately perhaps affecting their patients' birth outcomes.

We acknowledge that clinicians are often unfairly tasked with solving, or at least mitigating, harms inflicted on Black citizens by centuries of systemic discrimination both outside and inside the medical system. However, one of the tools in reducing infant mortality may be a positive and trusting relationship between the pregnant woman and her clinician, which is made easier when clinicians understand the historical forces facing Black women. This includes an awareness of their own implicit biases, the forces

of structural racism in creating the social determinants that may be impacting their compliance, and the cultural norms that influence their behaviors and decisions. Whether that understanding comes from being able to better communicate with their patients—or if being able to better communicate with their patients comes from an initial understanding—is yet to be determined. It may be a mutually-reinforcing cycle, and here is where research with both patients and providers will provide greater understanding.

This study is limited by its small size, which was impacted by the COVID-19 pandemic. No Black clinicians were interviewed, and studies of racial concordance between patients and providers have shown improved outcomes for Black patients.<sup>13,14</sup> Further, the research only investigates the point of view of care providers, not patients. When research begins again, additional interviews and focus groups will enhance these initial findings. Further research will be needed to establish any clear correlations between positive communication and positive birth outcomes, both quantitatively and from a patient perspective.

## PUBLIC HEALTH IMPLICATIONS

If additional research supports these preliminary findings, the findings could contribute to guidance for medical schools and hospitals to enhance communication skills among clinicians and other care providers. Trusting and supportive bonds between clinicians and Black pregnant patients could be one aspect of a societal approach to mitigate chronic stress, preterm birth, and infant mortality.

## ACKNOWLEDGMENTS

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COMMENTARY

# Racism Measurement Framework: A Tool for Public Health Action and Accountability

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## ABSTRACT

Racism is a principal determinant of health inequity, but recent events have galvanized local and state leaders across Ohio to declare racism a public health emergency. In addition to the renewed call to racial justice, sustained progress will require ongoing measurement to determine which anti-racist efforts are working, and why. In this review, we present existing measures categorized by 3 dimensions of racism that interact and build off of one another:

(1) systemic racism, considering the health effects of policies in housing, voting, criminal legal system, economic opportunity, and health care; (2) interpersonal racism, and measures of provider bias and cultural competency; (3) internalized racism, measured as allostatic stress and heightened vigilance in distinct contexts. After identifying knowledge gaps, we developed a racism measurement framework that more comprehensively depicts the disparities caused by racism within Ohio and can be used to monitor and evaluate the effectiveness of anti-racist efforts implemented across the state. As such, this framework provides not only a call for action against racism in Ohio, but an opportunity for organizations to measure the extent to which efforts have intervened on supposedly entrenched pathways to health inequities and disparities caused by racism.

**Keywords:** Racism; Measurement framework; Health outcomes; Evaluation; Health disparities

## INTRODUCTION

Racism has long been recognized as a principal determinant of health inequity,<sup>1,2</sup> but recent events have galvanized local and state leaders across the United States to declare racism a public health emergency,<sup>3,4</sup> with at least 23 resolutions across the state of Ohio, including Franklin, Cuyahoga, Hamilton, Lorain, Summit, and Montgomery counties, along with the cities of Akron, Canton, Columbus, Cleveland, Dayton, and Youngstown, among others.<sup>5-17</sup> Such declarations coincide with reports highlighting the disproportionate impact of COVID-19 on communities of color and the Black Lives Matter protests that were catalyzed by recent deaths at the hands of law enforcement.<sup>18-20</sup> The dual crises of COVID-19 and long-standing racism have put health inequities into the center of our collective awareness, further supporting the Columbus City Council's demand for a "data-driven focus on poverty, eco-

nomie mobility, and other factors that impact the social determinants of health (SDoH)."<sup>6</sup> Several proposed conceptual models of SDoH address racism,<sup>21-23</sup> but in the absence of a measurement framework there remains a gap in applying a data-driven approach that will enable health systems, government agencies, academic centers, community organizations, and public health professionals to combat racism.

Racism is an entrenched ideology in American society, with social and economic infrastructure designed to ingrain racial segregation.<sup>1,24,25</sup> The enduring impact of the transatlantic slave trade, which began roughly 400 years ago, as well as the history of European imperialism and colonization, continue to the present day, with millions suffering from generational trauma caused by systemic racism.<sup>26</sup> In a recent disciplinary self-critique, Hardeman and Karbeah describe how disciplines such as health services re-



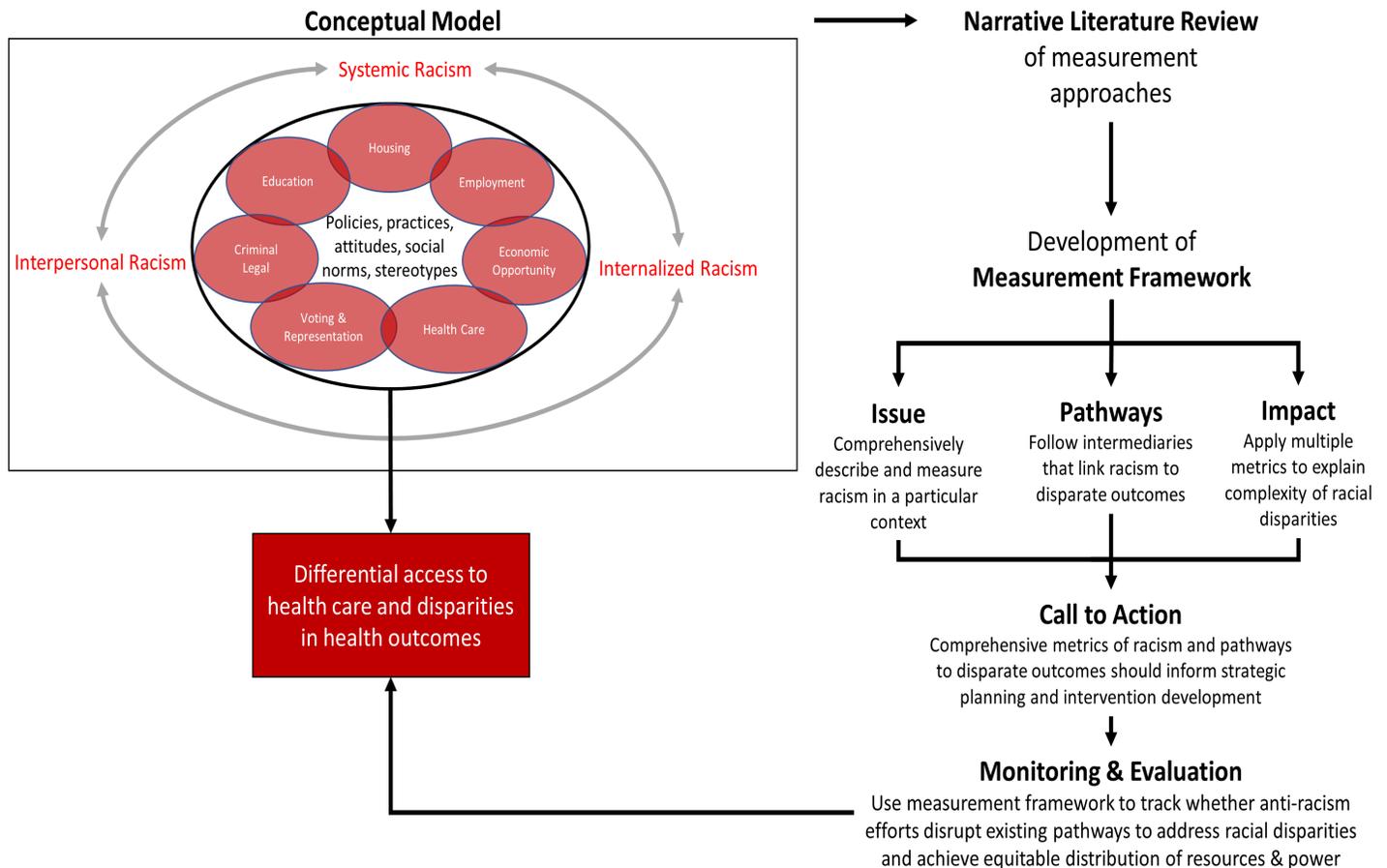


search do not challenge the underlying *white framing* (“the overarching worldview that encompasses important racial ideas, terms, images, emotion and interpretation, and lens by which white supremacy is perpetuated”) of racial disparities in health outcomes, and call upon researchers to develop research questions and methodologies that “take apart and critically analyze health inequities within the context of the white racial frame.”<sup>27</sup> Our aim in this paper is to propose a measurement framework with a series of metrics that captures the multidimensionality of racism and its effects on health. The framework is intended to provide a comprehensive list of indicators to inform monitoring and evaluation of anti-racist strategies that tackle social and health deficits attributed to racism.

**METHODOLOGY**

Racism is “a system of structuring opportunity and assigning value based on the social interpretation of how one looks, that unfairly disadvantages some individuals and communities, unfairly ad-

vantages other individuals and communities, and saps the strength of the whole society through the waste of human resources.”<sup>28</sup> It is important to note that multiple definitions of racism exist; however, most consider racism to be multidimensional and functioning on multiple levels. Figure 1 illustrates our conceptual model of racism that draws heavily from Jones’ theoretic framework and reflects dimensions of systemic racism, interpersonal racism, and internalized racism—and their points of intersection.<sup>29</sup> We began our narrative review by reflecting on seminal articles of “Race and Health” as well as articles that emerged using the simple search term of “racism measurement.”<sup>28-31</sup> From there, we used citations (citations of the paper and citations within the paper) to expand our literature search to identify more recent reflections and measurement indicators. Literature was gathered as it aligned with the dimensions in the conceptual model: systemic, interpersonal, and internalized. Metrics were included in the measurement framework if they had been used in at least 2 studies related to the measurement and/or description of disparities caused by racism.



**Figure 1. Establishing Measurements for Dimensions of Racism and Action**

This conceptual model is informed by a review of the literature and reflects the established multidimensionality of racism, often organized into 3 distinct, yet overlapping, domains: systemic, interpersonal, and internalized. The measurement framework is developed to characterize the levels of racism, the impacts of racism, and the hypothesized pathways between racism and health outcomes. The framework can be used to develop a call for action to prioritize strategic planning goals and interventions that tackle racism at multiple levels and to monitor and evaluate whether those efforts are creating sustainable changes towards health equity.



Gaps in measurement were identified from the literature as either a dimension where no metric was found or a metric with substantial quality concerns. Lastly, we present recommendations for how this framework can be applied in the public health context in Ohio to understand health disparities and assess the effectiveness of anti-racism activities across multiple dimensions of racism.

## MEASUREMENT FRAMEWORK FOR RACISM

### Systemic Racism

Systemic racism refers to the control of and access to labor, material, and symbolic resources within a society along racial lines. It is comprised of (1) structural racism, which involves the cumulative and compounding effects of an array of societal factors, including the history, culture, ideology, and interactions of institutions and policies that systematically privilege White people and disadvantage people of color; and (2) institutional racism, which refers to the unfair policies and discriminatory practices of particular institutions, such as schools and workplaces, that routinely produce racially inequitable outcomes for people of color and advantages for White people.<sup>30</sup> It represents “the ways in which societies foster discrimination through mutually reinforcing inequitable systems...creating interconnected systems that embed inequities” in practices, laws, and policies.<sup>31</sup> As such, systemic racism can be measured as the effects of policies on health (access and outcomes). In this section, we provide a brief overview of examples of racist policies and measures that track their impact on health outcomes. There are a number of well-established metrics for systemic racism in the policy sectors of housing, voting, criminal legal, economic opportunity, and health care, and Table 1 demonstrates how these metrics are linked to the SDoH and health outcomes.

### Housing

Residential housing patterns are the most well-studied metric of systemic racism. Residential segregation affects socioeconomic status (SES) and social mobility, as residence determines access to education and employment opportunities.<sup>32,33</sup> America’s history of systematic and institutionalized racism led to “redlining,” whereby neighborhoods were color-coded on maps, with communities of color designated as undesirable and color-coded red, making it more difficult and expensive for Black Americans to obtain loans and purchase homes.<sup>34</sup> In 1937, the Home Owners’ Loan Corporation redlining maps codified racial residential segregation into federal policy and practice from the 1940s through the 1960s,<sup>25</sup> where redlining remains at the heart of modern residential segregation metrics. For instance, contemporary Census tracts have been classified by the redlining maps to measure the Black-White disparity in odds of mortgage loan denial.<sup>35</sup>

*Metrics.* Two established measures include (1) index of dissimilarity, which is the proportion of Blacks or Whites who would have to move out of their neighborhood to achieve an even distribution,

or complete integration; and (2) isolation, which is the degree to which Blacks have potential contact with non-Blacks.<sup>32</sup>

### Voting

Measures of systemic racism in voting policy are outlined below. It is necessary to consider the effects of voter suppression laws, which are known to disproportionately affect people of color. As an example, 70% of voters in Georgia that were purged from the voter registration rolls were Black,<sup>36</sup> and across the country, 1 in 13 Black Americans cannot vote because of restrictive measures that have disproportionate effects.<sup>36,37</sup>

*Metrics.* Established measures in voting policy include proportions of Blacks to Whites who (1) were registered to vote, (2) actually voted, and (3) were elected to the state legislature.<sup>38</sup>

### Criminal Legal

Racial disparities in arrests and incarceration contribute to disparities in health outcomes caused by racism, with a recent study indicating that a greater number of criminal legal contacts among Black individuals contributes to more depressive symptoms, compared to White individuals.<sup>39</sup> We also must understand how the outcomes of the criminal legal system vary based on the color of the victim. Studies of execution outcomes point to inequity of Black and White lives, as defendants convicted of killing White victims were executed at a rate 17 times greater than those convicted of killing Black victims.<sup>40,41</sup>

*Metrics.* Measures of racism in the criminal legal system include proportions of Blacks to Whites who were (1) incarcerated, (2) disenfranchised felons, and (3) on death row.<sup>35,38</sup>

### Economic Opportunity

There is a strong correlation between the racial opportunity gap and the racial mortality gap, reflecting how differences in health outcomes are tied to differences in income, poverty, unemployment, and education.<sup>42</sup> When considering the effects of racism on economic opportunity, it is necessary to consider the generational accumulation of wealth and privilege.<sup>35,43</sup> Wealth disparities stem from policies that perpetuated racial divides in the labor market, namely the New Deal’s Fair Labor Standards Act of 1938 that largely excluded workers of color from its labor protections.<sup>44</sup> While this policy has been expanded, agricultural and domestic workers are still exempt from many protections, where racial and ethnic minorities comprise 58-70% of the workforce.<sup>44</sup>

*Metrics.* Established measures of economic opportunity include (1) earnings rank gap, which is the sex-specific difference between a Black individual’s percentile in the Black earnings distribution and the position in the White earnings distribution<sup>45</sup>; (2) racial opportunity gap, which is the sex-specific difference in income percentile ranking in adulthood between Black and White children born to families at the same income level in the same county<sup>42</sup>; and (3) proportions of Blacks to Whites who were (a) employed, (b) in the labor force, (c) in executive or managerial positions, (d) in professional specialties, and (e) college-educated.<sup>35,38</sup>



### Health care

To assess systemic racism in health care policy, we consider racial biases in coverage and services received by both public and private insurers. In terms of coverage, the proportion of physicians participating in Medicaid is declining, influencing what health services exist in a given locale.<sup>46,47</sup> Restricted health access for Medicaid patients disproportionately affects racial and ethnic minorities, who are 2.5 times more likely to have Medicaid coverage than non-Hispanic Whites.<sup>46,47</sup> To add to the disparity, we see that White patients receive better quality of care than Black patients.<sup>48,49</sup>

Furthermore, health systems that rely on commercial prediction algorithms can exhibit significant racial bias, with Black patients having significantly greater illness burden than Whites at the same level of algorithm-predicted risk.<sup>50</sup> Similarly, the Coronavirus Aid, Relief, and Economic Security (CARES) Act allocated funds to hospitals as a function of their past revenue, which disproportionately affected Black counties, who received the same level of relief funding as counties with lower COVID-19 burden and financial need.<sup>51</sup> Such racial biases arise because existing algorithms predict health care costs rather than illness, but health care costs are a poor proxy for health care needs because health-related expenditures are impacted by barriers to health care access. Notably, barriers to health care access may be further worsened in the transition to telehealth with the additional barriers of the digital divide and telehealth literacy, resulting in reduced use of health services among Black patients.<sup>52</sup>

*Metrics.* Measures include (1) proportions of physicians participating in Medicaid by county racial demographics or neighborhood segregation indices, (2) illness burden at same level of algorithm-predicted risk<sup>47,50</sup> and (3) digital divide associated with telehealth.<sup>52</sup>

### Interpersonal Racism

As previously noted, there is a considerable distinction between needing and receiving health care, which provides insight into interpersonal racism in health care. Interpersonal racism, whether intentional or unintentional, refers to discriminatory practices and beliefs directed at persons in the targeted social group by persons in the privileged, or dominant, social group, taking the form of suspicion, devaluation, scapegoating, and dehumanization.<sup>29,53</sup> Interpersonal racism and systemic racism often overlap because these interpersonal practices and beliefs become embedded in structural relations.<sup>29</sup> This interplay between interpersonal and systemic racism arises from power dynamics and extends across multiple sectors, with studies highlighting the negative effects of subtle indicators of racial identity on employers' perceptions of qualifications, competence, and "professionalism."<sup>54-56</sup> Health care provider bias has particularly salient effects on health outcomes, as providers' perceptions regarding patients' value, self-reliance, competence, and deservingness lead to inequitable medical testing, referrals, treatment, procedures, and pain management.<sup>57-59</sup>

Providers' implicit biases are particularly pernicious towards Black women, often reinforcing stereotypes of Black women being uneducated, licentious, problematic drug users, with an overdependence on public assistance.<sup>60-62</sup> Biases are present in more subtle ways, including exhibiting fewer positive, rapport-building nonverbal cues with Black patients.<sup>63</sup>

Interpersonal racism, in conjunction with systemic racism, contributes to the already disparate health outcomes in Ohio. It is important to note that the purpose of measurement is not to merely document disparities but to incite anti-racist action by identifying opportunities for intervention.<sup>64,65</sup> Recognizing that these discrepancies in health outcomes are the result of social barriers, with provider bias being among the most frequently cited barrier,<sup>66</sup> medical education and health systems have adopted cultural competency training as a standard of practice, evidenced by the national standards for Culturally and Linguistically Appropriate Services (CLAS) in health care.<sup>67</sup> Many studies, however, have deemed cultural competency training inadequate, and others have noted its ability to ignore oppressive structures of power and to compound cultural, ethnic, and racial stereotypes.<sup>68-71</sup> As an alternative to cultural competency training, structural competency has been proposed as a framework for responding to social, political, and economic structures that influence the health of patients.<sup>70,72</sup> The Structural Vulnerability Assessment Tool was developed for clinicians to take inventory of patient vulnerability and, in this way, can minimize the influence of provider biases on patient care plans.<sup>68</sup>

*Metrics.* Health services metrics provide a reliable means of capturing interpersonal racism between patients and providers as well as the interplay between interpersonal and systemic racism. Such metrics include patient satisfaction with health services and perceived quality of care; trust in health system and professionals<sup>73</sup>; communication and relationship with health service professionals; frequency of delaying, or simply not getting, health care; and visits and admissions to hospitals and emergency departments.<sup>74</sup>

### Internalized Racism

The demarcation between interpersonal and internalized racism is often nebulous, which demonstrates that even though racism is multidimensional, these different levels interact and build off of one another. Internalized racism is the incorporation of attitudes, beliefs, or ideologies into one's worldview that maintain or exacerbate the unequal distribution of opportunity across ethnic and/or racial groups.<sup>75,76</sup> Such racism takes on one of two forms: internalized oppression or internalized dominance, both of which hinge on the concept of embodiment, in which engagement with the material and social world transforms the body.<sup>76,77</sup> As such, internalized racism can contribute to allostatic stress, causing accelerated aging and earlier onset of disease due to biological "weathering,"<sup>78</sup> as well as patient disempowerment and fatalism, which negatively affect health care utilization and preventive care.<sup>79</sup>



A number of survey instruments exist, each tailored by target audience and survey length, including, but not limited to, the Everyday Discrimination Scale, Major Experiences of Discrimination, Chronic Work Discrimination and Harassment, Heightened Vigilance Scale, Index of Race-Related Stress (IRRS), Perceived Ethnic Discrimination Questionnaire (PEDQ), Workplace Prejudice/Discrimination Inventory (WPDI), Experiences of Discrimination (EOD), Racism and Life Experience Scales (RaLES), Multidimensional Inventory of Black Identity (MIBI), Schedule of Racist Events (SRE), and Workplace Racial Bias Measure (WRB).<sup>30,80,81</sup>

**Metrics.** Surveys are a common measurement technique to assess internalized racism, such as the Perceived Racism Scale, which assesses behavioral and emotional responses to the experience of racism as well as frequency of exposure.<sup>82</sup> Surveys typically ask about distinct contexts (workplace, health care, school, etc) to capture the interplay between internalized, interpersonal, and systemic racism.<sup>83</sup> Despite their ubiquity, surveys' reliance on self-report data presents a unique set of problems, namely response-shift bias and social desirability bias.<sup>84,85</sup> The Implicit Association Test (IAT) can be adapted to evaluate whether those most affected by discrimination are willing to recognize and report it as such, thereby minimizing cognitive problems affecting self-report data.<sup>86</sup>

### OPPORTUNITIES FOR USE OF MEASUREMENT

Following the review of the metrics associated with systemic, interpersonal, and internalized racism, we have identified several gaps that can be addressed with a more robust measurement framework. Understanding the interplay between racism and health is not enough, however; as Nancy Krieger notes, "the reason to study how injustice harms health is not to prove that injustice is wrong, since it is, by definition...the reasons are to deepen understanding of how injustice shapes population health...and to generate evidence for accountability."<sup>53</sup> To "generate evidence for accountability," as Krieger puts it, we have identified gaps in the literature, outlining the following list of opportunities for use of measurement, which is not about *new* measures, but, instead, using accurate measures consistently and mapping such measures to investments to become more accountable.

#### Systemic Racism

*(1) Develop a baseline understanding of racial disparities across sectors in Ohio.* One starting point would be the development of a "Disparity Report" for the State of Ohio, mirroring the initiative of the New York City Disparity Report, which includes indicators in education, economic security and mobility, health and wellbeing, and personal and community safety, with each metric segmented by race.<sup>87</sup> The Ohio Department of Health has put forth reports on disparities in infant mortality and pregnancy-related mortality caused by racism,<sup>88,89</sup> but to share disparities in an actionable way, organizations and institutions should embrace the framework described herein to consider the many dimensions that contribute

to such outcomes. Table 2 in the Appendix provides an example of a more comprehensive analysis that is possible with existing measures, presenting disparities in health outcomes alongside disparities in the built environment, economy, education, and criminal legal system, as it presents intermediaries between racism and metrics shown in Table 1. More work, however, is needed to incorporate aspects of structural racism in preparing health equity and anti-racism data reports.<sup>70,90,91</sup>

*(2) Understand how existing algorithms contribute to racial bias, which sectors are affected, and other labels on which the algorithm can be trained to mitigate the effects of racial bias.* Using the health system's algorithm for high-risk care management programs as a continued example, alternative label choices include avoidable costs (eg, emergency visits and hospitalizations), number of chronic conditions, and a combined health prediction with cost prediction, which can reduce racial bias by as much as 84%.<sup>50</sup> Highlighting the importance of how an algorithm is trained is relevant beyond the health care sector. For instance, credit-scoring algorithms predict outcomes by income, a measure that reflects structural inequalities related to employment and salary.<sup>92</sup> Similarly, hiring algorithms exhibit bias with respect to race and sex.<sup>93,94</sup> Further research is needed on the data sources, such as claims data, that contribute to the racial bias in algorithms when cost prediction is used.

*(3) Explore dimensions of ethnicity.* To assess the extent of variation within racial and ethnic groups and identify which subgroups are most affected, researchers should collect more detailed ethnic data (eg, breaking down Hispanic into Cuban, Dominican, Mexican, and Puerto Rican). Further sampling questions regarding citizenship, voting rights, and place of birth of participants, their parents, and their grandparents will not only enable better understanding of ethnic diversity but also provide an opportunity to more precisely study how contemporary immigration policy adversely affects health.<sup>28,95,96</sup>

*(4) Use new tools in policy analysis to quantify impact.* Within policy analysis, there are ample opportunities to contribute because there is a lack of empirical evidence to identify which mechanisms of segregation—educational opportunity, labor market, or housing quality—should be tackled first, which would have the largest impact, and which is most likely to trigger ripple effects to other pathways on an individual's health.<sup>95</sup> The development and deployment of a "Disparity Report" could help in this regard. To identify the proximal mechanisms that link segregation to health, data scientists and statisticians must leverage (a) new models that capture dynamic historical processes that influence each other over time at multiple levels of analysis to provide a new way of seeing and understanding persistent problems, and (b) new statistical techniques, such as instrumental variable (IV) analyses, to estimate the causal effects of segregation by reducing or eliminating bias related to selection and unmeasured confounding variables.<sup>97,98</sup>



## Interpersonal Racism

There exist a few opportunities for health systems to assess how individual and systemic changes can promote the adoption of anti-racism in care delivery.

(1) *Capture a baseline measure of potential effects of interpersonal racism in health care.* Quantitative and qualitative indicators should be considered, such as patient satisfaction with health services and perceived quality of care; trust in health system and professionals; communication and relationship with health service professionals; frequency of delaying, or simply not getting, health care; and visits and admissions to hospitals and emergency departments.<sup>74</sup>

(2) *Evaluate how clinical organizations adhere to anti-racism efforts such as cultural competency standards.* Although cultural competency has for many years been proposed to mitigate the effects of interpersonal racism in health care, more research has shown that structural competency in terms of changes at the health system level are needed to affect behavioral change.<sup>29</sup> Baseline measures could provide better insight into the benefits of training in structural competency rather than cultural competency (or other existing standards of practice) as well as facilitate routine monitoring of progress in its institutional anti-racism agenda, much like Ohio State University Wexner Medical College has outlined, with its commitment to evaluate efforts and deliver annual anti-racism reports.<sup>90</sup> The CLAS Standards require health care organizations to establish culturally and linguistically appropriate goals and policies that are incorporated into the organization's clinical operations, providing an early roadmap, but a more elaborate measurement framework is needed to evaluate performance against the standards and inform quick course correction if efforts do not result in systemic change. Organizations such as Multiethnic Advocates for Cultural Competence,<sup>99</sup> which is a community expert in cultural competency training, would serve as an excellent partner in developing organizational and practice-based measures that align and/or expand on the CLAS standards. Ohio's COVID-19 Minority Health Strike Force Blueprint has also highlighted several strategies for dismantling racism through cultural and linguistic competency.<sup>100</sup>

(3) *Develop better methods of quantifying discrimination.* Additional research is needed to determine optimal approaches for comprehensively measuring discrimination in all its dimensions, including chronicity, recurrence, severity, and duration.<sup>95</sup>

## RECOMMENDATIONS FOR APPLYING RACISM MEASUREMENT FRAMEWORK IN PRACTICE

### Systemic Racism

(1) *Participate in community-based and community-engaged research and evaluation.* Among academic centers, there is an even greater need for community partnerships and collaborations, evaluating interventions for (a) the extent to which they may be differentially effective across diverse subsets of the populations and

(b) cost-effectiveness, but it is critically important that researchers engage with communities and build on their existing knowledge and insights by incorporating community members in all phases of research including study design, data collection, analysis, and dissemination.<sup>34,95,101</sup> In Ohio, there are several organizations invested in addressing the SDoH and racism through effective interventions, as highlighted in Table 2 in the Appendix. These models need to be evaluated, disseminated, and adopted by others attempting to address complex problems. When pursuing community-engaged research, research budgets should take into account the need for translation resources and services as well as compensation for survey respondents.<sup>34</sup>

### Interpersonal Racism

(1) *Consider adoption of the Structural Vulnerability Assessment Tool.* The Structural Vulnerability Assessment Tool operationalizes the concept of structural competency and provides a way to assess patients' nonmedical social needs, while minimizing the influences of provider bias.<sup>68</sup> Importantly, the Structural Vulnerability Assessment Tool includes questions about discrimination, providing an opportunity for medical centers and health systems to assess discrimination without having to administer another survey or questionnaire to a subset of the patient population.

### Internalized Racism

(1) *Reconsider race as a variable in research.* As a starting point, researchers must reconsider race as a mere "dummy variable,"<sup>102</sup> taking into account their *a priori* assumptions of how race plays into the model as a way of recognizing potential biases, which is a critical component in the Public Health Critical Race Praxis (PHCRP) framework.<sup>1,27,34</sup> The PHCRP contributes an anti-racism lexicon based on critical race theory (CRT) that avoids the repeated use of "vulnerable," a common euphemism embedded in public health literature that is used to soften, if not avoid, the discussion of racism.<sup>103,104</sup>

## CONCLUSION

The COVID-19 pandemic, the deaths of George Floyd and Breonna Taylor among countless others, coupled with the resurgence of the Black Lives Matter movement, has advanced investments in anti-racism efforts, but it remains to be determined if the implementation of these efforts will result in meaningful change.<sup>105</sup> A measurement framework is needed to understand the issue of racism more deeply, challenge the *white racial framing* by considering racism's many dimensions,<sup>27</sup> and elucidate whether anti-racism efforts are changing the pathways toward more equitable health access and outcomes. In this way, organizations and agencies can apply this framework to their own anti-racism agendas to differentiate what is working from what is not and to identify what can be generalized to other settings. This level of evaluation is needed to translate declarations of "racism as a public health emergency" into actions, advancing the pursuit of health equity in the state of Ohio.



**Table 1. Mapping the Metrics of Systemic Racism onto Social Determinants of Health and Health Impacts**

Policy Sector	Relevant Policy	Metrics	Social Determinants of Health	Health Impact
Housing	Redlining <sup>32,34</sup> Homestead Act <sup>33</sup>	<i>Index of dissimilarity</i> : proportion of Blacks or Whites who would have to move out of their neighborhood to achieve an even distribution, or complete integration <sup>32</sup>	Lower quality housing and schools <sup>106</sup> Food deserts <sup>107</sup> Environmental racism <sup>108</sup>	Reduced access to health services <sup>109</sup> Segregated hospitals with lower quality of care <sup>108</sup> Primary care shortage <sup>108</sup> Decreased utilization of services <sup>110</sup> Shortened life expectancy <sup>111</sup> Higher risk of COVID-19 <sup>112</sup>
		<i>Isolation</i> : degree to which Blacks have potential contact with non-Blacks <sup>32</sup>		
Criminal Legal	War on Drugs <sup>113</sup> Policing <sup>113</sup> Mass incarceration Sentencing disparities Mandatory minimums	Proportions of Blacks to Whites who were <sup>35,38</sup> : incarcerated disenfranchised felons on death row	Generational poverty Single-parent households	Black-White gaps in depressive symptoms <sup>39</sup> Adverse childhood experiences (ACEs) <sup>114</sup> Elevated mortality risk <sup>115</sup> Higher community-level incidence of HIV <sup>115</sup> Decreased utilization of health care <sup>116</sup>
Economics	New Deal's Fair Labor Standards Act of 1938 (FLSA) <sup>44</sup> Wagner Act <sup>44</sup> Right-to-work laws <sup>44</sup>	<i>Earnings rank gap</i> : sex-specific difference between a Black individual's percentile in the Black earnings distribution and the position in the White earnings distribution <sup>45</sup>	Generational poverty Barriers to higher education Barriers to health care access Higher uninsured rates	Lower self-reported health status (SRHS), a measure correlated with objective measures of health, including mortality and functional decline <sup>54</sup> Reduced cognitive functioning <sup>54</sup> Heightened cardiovascular and coronary mortality <sup>54</sup> Worsened psychological health that is tied to greater exposure to psychosocial job stressors and low job control and support <sup>54</sup>
		<i>Racial opportunity gap</i> : sex-specific difference in income percentile ranking in adulthood between Black and White children born to families at the same income level in the same county <sup>42</sup>		
		Proportions of Blacks to Whites who were employed <sup>35,38</sup> : were in the labor force were in executive or managerial positions were in professional specialties had attained a bachelor's level degree or higher		
Voting	Voter Suppression Laws, including <sup>36,37</sup> : government-issued photo ID requirements citizenship laws elimination of same-day voter registration reductions of early and absentee voting days restrictions on restoration of voting rights for felons gerrymandering voter purging	Proportions of Blacks to Whites who <sup>38</sup> : were registered to vote actually voted were elected to the state legislature	Social isolation <sup>117</sup> Limited social capital <sup>117</sup> Lower levels of education attainment <sup>117</sup> Lower income <sup>117</sup>	Lower self-rated health <sup>118</sup> Worsened psychological health tied to increased allostatic load <sup>119</sup> Reduced life expectancy <sup>120</sup>
Health care	Medicaid reimbursement rates Employing algorithms that use cost prediction as its metric Hill-Burton Act <sup>121</sup> GI Bill <sup>121</sup> Exclusion by American Medical Association <sup>121</sup>	Proportions of physicians participating in Medicaid by county racial demographics <sup>47</sup> Illness burden at same level of algorithm-predicted risk <sup>50</sup>	Restricted health access <sup>46,47</sup>	Reduced use of health services <sup>50,108,110</sup> White patients receiving better quality of care than Black patients <sup>50</sup> Under-enrollment of Black patients in high risk care management programs <sup>50</sup>

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APPENDIX Table 2. Landscape of Disparities Caused by Racism in Ohio and Opportunities for Community-Based Intervention

Indicator	Non-Hispanic White	Non-Hispanic Black	Rate Ratio (Black v. White)	Examples of Ohio Organizations & Initiatives Addressing Indicator with Racial Equity Lens
<b>Maternal &amp; Infant Health</b>				
No Prenatal Care <sup>122</sup>	8.0%	19.5%	2.4	CelebrateOne; First Year Cleveland; Cradle Cincinnati; Birthing Beautiful Communities
Preterm Birth <sup>123</sup>	9.4%	14.4%	1.5	
Low Birthweight <sup>123</sup>	7.3%	14.3%	2.0	
Infant Mortality <sup>89</sup> (per 1,000 live births)	5.4 deaths	13.9 deaths	2.6	
Maternal Mortality <sup>88</sup> (per 100,000 births)	11.5 deaths	29.5 deaths	2.6	
<b>Built Environment</b>				
Homelessness <sup>124</sup>	45.0%	49.5%	1.1	Affordable Housing Alliance of Central Ohio; Homeless Families Foundation; Coalition on Homelessness and Housing in Ohio; Bessie's Angels; YWCA; United Way; Greater Cincinnati Homeless Coalition
Housing Instability <sup>125</sup>	43.5%	54.9%	1.3	
No Home Ownership <sup>126</sup>	28.1%	63.9%	2.3	
<b>Early Childhood</b>				
Not Kindergarten Ready	53.0%	76.1%	1.4	Family and Children First Council; Action for Children; Columbus Early Learning Centers; Tamir Rice Foundation; United Way
Not at 3 <sup>rd</sup> Grade Reading <sup>127</sup>	28.0%	61.0%	2.2	
3 <sup>rd</sup> Grade Suspensions & Expulsions <sup>127</sup>	5.1%	45.1%	8.8	
Food Insufficiency <sup>128</sup>	5.0%	22.0%	4.4	
Physical Inactivity <sup>129</sup>	82.0%	81.3%	1.0	
Incomplete Vaccinations <sup>123</sup>	34.6%	39.8%	1.2	
Childhood Poverty <sup>127</sup>	18.2%	53.9%	3.0	
Adverse Childhood Experiences (ACEs) <sup>127</sup>	40.0%	61.0%	1.5	
Childhood Asthma <sup>130</sup>	6.3%	17.2%	2.7	
<b>Mental Health</b>				
Substance Use in Middle School <sup>131</sup>	8.9%	17.5%	2.0	Urban League; Safe Point; Harm Reduction Ohio; Urban Minority Alcoholism and Drug Abuse Outreach Program of Franklin County; Big Brother Big Sister; Peel Dem Layers Back; Ohio Organizing Collaborative
Substance Use in High School <sup>131</sup>	8.9%	23.5%	2.6	
Overdose Mortality <sup>132</sup>	33.4 deaths per 100,000 residents	37.6 deaths per 100,000 residents	1.1	
Depression <sup>129</sup>	23.3%	18.1%	0.8	
Suicide <sup>133</sup>	16.7 deaths per 100,000	9.8 deaths per 100,000	0.6	
<b>Reproductive Health</b>				
Unintended Pregnancy <sup>122</sup>	21.3%	40.7%	1.9	Planned Parenthood; Preterm; New Voices Cleveland
Teenage Pregnancy <sup>134,135</sup>	17.6 per 1,000 women aged 15-19	39.5 per 1,000 women aged 15-19	2.2	
<b>Education Outcomes</b>				
No High School Diploma <sup>127</sup>	12.1%	31.9%	2.6	Ohio Gap Closers; Urban League; United Way; Ohio Organizing Collaborative
No Bachelor's Degree <sup>127</sup>	72.4%	83.9%	1.2	
<b>Labor &amp; Economy</b>				
Household Income <sup>126</sup>	\$56,395	\$30,575	N/A	Ethiopian Tewahedo Social Services; Urban League; 1,000 Ties; United Way; Mortar
Unemployment Rate <sup>136</sup>	4.3%	6.9%	1.6	
Poverty Rate <sup>137</sup>	10.7%	28.8%	2.7	
<b>Health &amp; Disease</b>				
Heart Disease Mortality Rate (per 100,000 people)	185.6 deaths	211.8 deaths	1.1	Healthcare Collaborative of Greater Columbus; Northeast Ohio Black Health Coalition; Sisters of Charity Foundation
Stroke Mortality Rate (per 100,000 people)	42.2 deaths	51.6 deaths	1.2	
Diabetes Mortality Rate (per 100,000 people)	23.6 deaths	41.2 deaths	1.7	
Cancer Mortality Rate (per 100,000 people)	176.3 deaths	196.5 deaths	1.1	
Kidney Disease Mortality Rate (per 100,000 people)	13.5 deaths	29.6 deaths	2.2	
Life Expectancy <sup>138</sup>	78.1 years	73.9 years	N/A	
<b>Criminal Legal System</b>				
Youth Incarcerated in Juvenile Correctional Facilities (JCFs) <sup>139</sup>	33.1%	55.6%	1.7	Intercommunity Justice and Peace Center; Ohio Justice and Policy Center; People's Justice Project; Broken Chains Ministry; Ohio Organizing Collaborative
Imprisonment Rate <sup>140</sup>	289 per 100,000	1,625 per 100,000	5.6	
Death Row <sup>141</sup>	40.4% (57 of 141 inmates on death row)	56.7% (80 of 141 inmates on death row)	1.4	



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